

What is claimed is:

1. A communication system for performing
2 short-range radio communication between a plurality of
3 communication nodes, wherein
4 each of said communication nodes comprises:
5 a transmission/reception unit which
6 transmits/receives an elastic wave;
7 a first circuit which drives said
8 transmission/reception unit on the basis of transmission
9 data; and
10 a second circuit which demodulates reception
11 data from an output from said transmission/reception
12 unit.
2. A system according to claim 1, wherein a
2 transmission medium for the elastic wave is a solid
3 member.
3. A system according to claim 2, wherein the
2 solid member is a desk.
4. A system according to claim 3, wherein said
2 communication node is placed on the desk such that said
3 transmission/reception unit is brought into contact with
4 the desk.

5. A system according to claim 1, wherein a
2 transmission medium for the elastic wave is a gas.

6. A system according to claim 5, wherein the gas
2 is air, and the elastic wave is a sonic wave.

7. A system according to claim 6, wherein said
2 transmission/reception unit comprises an ultrasonic unit
3 having a plurality of ultrasonic elements in the form of
4 an array which emit the elastic waves in all directions.

8. A system according to claim 1, wherein when
2 said communication nodes are geographically distant from
3 each other, an elastic wave having the same frequency is
4 repeatedly used.

9. A system according to claim 1, wherein
2 said communication node comprises:
3 a plurality of base stations arranged in a
4 plurality of cells obtained by dividing a service area;
5 and
6 a mobile terminal which is located in a cell
7 and communicates with a corresponding one of said base
8 stations, and
9 communication between said base station and
10 said mobile terminal in two cells which are distant from
11 each other is performed by repeatedly using the elastic

12 wave of the same frequency.

10. A system according to claim 1, wherein
2 said communication node is connected to a wire
3 network, and
4 communication using the elastic wave and
5 communication through said wire network are selectively
6 performed between said communication nodes.

11. A method of performing short-range radio
2 communication between a base station and a mobile
3 terminal, comprising the steps of:
4 multiplexing transmission signals at the base
5 station;
6 converting the multiplexed signal into an
7 elastic wave and transmitting the elastic wave from the
8 base station to the terminal;
9 multiplexing transmission signals at the
10 terminal connected to the based station, and
11 converting the multiplexed signal into an
12 elastic wave and transmitting the elastic wave from the
13 terminal to the base station.

12. A method according to claim 11, wherein a
2 transmission medium for the elastic wave is air, and the
3 elastic wave is a ultrasonic wave.